

**STATE OF NEW MEXICO
BEFORE THE ENVIRONMENTAL IMPROVEMENT BOARD**

IN THE MATTER OF:

PROPOSED NEW REGULATION

20.2.50

No. EIB 21-27 (R)

Oil and Gas Sector – Ozone Precursor Pollutants

REBUTTAL TESTIMONY OF JOHN SMITHERMAN

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. John R. Smitherman. My official work address is 123 Booth St., Santa Fe, NM, 87505.

Q. ARE YOUR QUALIFICATIONS PROVIDED IN YOUR DIRECT TESTIMONY IN THIS MATTER?

A. Yes.

Q. AFTER REVIEWING THE BISBEY-KUEHN/PALMER TESTIMONY IN EXHIBIT 32, PAGE 12, SHOULD THE EIB REVISE THE PROPOSED RULE SECTION 20.2.50.2, “SCOPE” TO CLARIFY THE GEOGRAPHIC REACH OF PROPOSED PART 50?

A. Yes. This is an important rule which imposes significant burdens on industry. These burdens should apply only to counties that meet the requirements for ozone reduction. Those should be limited to Dona Ana, Eddy, Lea, Sandoval, San Juan, and Valencia. We do not believe that Rio Arriba County should be included because its current design value, as reported in Mr. McNally’s testimony, is less than 95% of the NAAQS. Chavez County does not have a monitor and hence has no recognized design value.

Q. DO NMOGA’S PROPOSED REDLINES AT NMOGA EXHIBIT 47, WHICH LIST THE AFFECTED COUNTIES THAT CURRENTLY EXCEED 95% OF THE OZONE NAAQS, PROVIDE A BETTER WAY TO SET FORTH THE GEOGRAPHIC SCOPE TO ALLOW INDUSTRY TO COMPLY?

A. Yes. NMOGA’s suggested language makes it clear what is required to apply these regulations to any county in the state so that all counties that qualify and only those counties that qualify are included.

Q. AS AN INDUSTRY OPERATING EXECUTIVE, DOES THE CURRENT 20.2.50.2 “SCOPE” PROVISION AS EXPLAINED BY MS. BISBEY-KUEHN AND MR. PALMER IN EXHIBIT 32, PAGE 12, PROVIDE AN ADEQUATE EXPLANATION OF HOW

1 TRANSITION PROVISIONS WILL BE PROVIDED FOR ANY AREAS OF THE STATE
2 THAT ARE SUBSEQUENTLY BROUGHT INTO PART 50 RULE, IF ADOPTED BY THIS
3 BOARD?

4 A. No. This testimony simply states that at any time after the effective date if an area of the
5 state (a county) meets the requirements for applicability then these regulations apply. There is no
6 provision for a process to ensure public or industry feedback in this decision making nor any
7 time period to come into compliance such as currently is provided in this proposed rulemaking.
8 Further, it is not clear how any operator would even be aware of some decision-making process
9 taking place within NMED to expand the area of applicability. I think it is important to identify
10 those counties where this rule will be applicable during this rulemaking process. Just as
11 important will be informing the public, including the oil and gas industry, of future additions to
12 that list of counties. The addition of new areas without, at a minimum, notice to the public and,
13 ideally, a public process and implementation period would impose significant hardship. Both
14 from a financial and operations perspective, on industry due to the inability to plan and prepare
15 for the operational changes, engineering design process, equipment procurement and
16 installations, and other important activities that would be required to be in compliance at all sites
17 within the new area(s).

18 Q. IS NMOGA'S PROPOSED REDLINES AT NMOGA EXHIBIT 47, WHICH PROVIDE
19 THAT A FUTURE PETITION TO INCLUDE THE SUPPORTING DATA FOR THE
20 DESIGNATION DECISION, A PROPOSED RULE REVISION STATING THE SPECIFIC
21 GEOGRAPHIC AREAS TO BE COVERED, AND PROPOSED IMPLEMENTATION DATES
22 GENERALLY CONSISTENT WITH THOSE PROVIDED IN THIS RULE, A PRUDENT
23 ADDITION, GIVEN THE BISBEY-KUEHN/PALMER TESTIMONY THAT IT APPLIES
24 "ANYTIME THEREAFTER" AN AREA EXCEEDS 95% AND HENCE COULD
25 POTENTIALLY BE IMMEDIATELY APPLICABLE?

26 A. NMOGA has suggested that a process apply to the decision to expand these regulations to
27 other areas of the state should those areas appear to meet the applicable standards. That process
28 would allow stakeholders the opportunity to offer data and testimony related to the issues before
29 a decision is made. Further, should other areas become subject to this rule, transition
30 considerations should apply just as they do in the rule for areas that do meet the criteria as of the
31 effective date of this rule.

32 Q. EXPLAIN WHY.

33 A. This rule imposes significant operational and cost burdens on industry. These burdens
34 should be carefully applied only in areas that meet the requirements and allowing public and
35 industry input is an important facet of that decision making. This hearing is a case in point and
36 NMOGA agrees that the following counties do meet those requirements: Dona Ana, Eddy, Lea,
37 Sandoval, San Juan, and Valencia. We believe that Rio Arriba and Chavez counties do not and
38 Dennis McNally will provide technical testimony supporting that position. As for situations in
39 the future, should NMED believe that an additional area or areas become subject to this rule
40 (after an appropriate process) it will take time for the industry to make the necessary changes to

their operations to comply with the many technical requirements of this rule. Just as this rule allows for transition times for the various sections once this rule is effective, any subsequent expansion to new counties should similarly provide for practical transition timeframes due to supply chain challenges and other practical considerations.

Q. IN PROPOSED SECTION 20.2.50.6 “OBJECTIVE” AT NMOGA EXHIBIT 47, WHY HAS NMOGA PROPOSED TO ADD THE WORDS “NATURAL GAS” PRIOR TO “TRANSMISSION SOURCES” WHEN NMED HAS NOT INCLUDED THIS TERM?

A. Based on MS. Bisby-Kuehn’s and Mr. Palmer’s testimony in Exhibit 32, page 23, it appears that oil transmission is not intended to be included in the rule. So this term has been suggested to distinguish between natural gas transmission systems, which are appropriate for this rule and crude oil transmission systems, which are not.

Q. IN PROPOSED 20.2.50.7.G “COMMENCEMENT OF OPERATION” AND IN EXHIBIT 32, PAGES 14-15, MS. BISBY-KUEHN AND MR. PALMER PROPOSED TO END THE COMMENCEMENT PERIOD “NO LATER THAN THE END OF WELL COMPLETION OPERATIONS.” DO YOU BELIEVE THIS IS APPROPRIATE?

A. No. Especially considering the recently adopted Waste Rule by the Oil Conservation Commission, there may be situations when the first well to be served by a production facility must be shut in for an extended period of time after it has been completed, perhaps because the operator is waiting on the completion of gas gathering facilities. In such situations no oil, gas or produced water will be flowing through the facility so it makes no practical sense to begin required activities like leak inspections (LDAR), etc. By removing this last sentence, the rule will be applicable the entire time that a facility is actually handling oil, gas, or produced water production.

Q. BASED ON POSSIBLE DELAYS IN PRODUCTION PIPELINE AVAILABILITY, DO YOU BELIEVE THAT CHANGES REFLECTED IN NMOGA EXHIBIT 47 PROVIDES A BETTER DEFINITION FOR THE START OF COMMERCIAL SALE?

A. Yes. NMOGA’s language provides for full applicability of the requirements during all periods of production.

Q. NMED HAS PROPOSED AT 20.2.50.7.J THAT “CONSTRUCTION” INCLUDE “RELOCATION” OF A STATIONARY SOURCE AND INCLUDE TEMPORARY INSTALLATIONS AND PORTABLE SOURCES. IN ITS TESTIMONY (EXHIBIT 32, PAGE 15), MS. BISBY-KUEHN AND MR. PALMER SIMPLY STATE NMED IS FOLLOWING 20.2.72 NMAC. WHAT IS THE PROBLEM WITH THIS APPROACH?

A. 20.2.72 NMAC is related to obtaining a construction permit. While it may be appropriate to include provisions addressing the relocation of a permanent source in regulations governing the issuance of construction permits, these same concepts should not apply to regulations targeting the management of ozone precursors at existing facilities. The replacement of equipment at an existing site with either similar/like-kind equipment or, when appropriate, more properly sized equipment, is a common practice that reduces compression equipment emissions

1 by minimizing downtime and optimizing the size of compressor engines while adhering to the
2 requirements of an existing permit. For example, operators typically utilize higher horsepower
3 compressors/engines to assist with high throughput requirements for newer wells. Over time the
4 throughput requirements will diminish so operators will replace the compressors/engines to more
5 efficiently handle the changed throughput requirements. This allows operators to optimize
6 equipment which thereforreduces emissions. Another example is the practice of performing
7 major maintenance in a shop environment by swapping an engine/compressor in the field with
8 one that has been through major maintenance in a shop. Utilizing a field/shop swap reduces
9 downtime that would be required to perform that same work on the equipment in the field. This
10 process can also result in better results simply because the work is done in a controlled shop
11 environment which then results in reduced emissions due to less operating downtime. If
12 relocation of engines/compression equipment manufactured or remanufactured prior to the
13 effective date of this rule causes an “existing engine” to have to meet “new engine” emissions
14 requirements, this will disincentivize the industry from those very practices just described and
15 will increase emissions due to 1) less optimized engine/compressor sizing and 2) less effective
16 major maintenance.

17 Q. DOES THE NMOGA DEFINITION AT NMOGA EXHIBIT 47 PROVIDE A BETTER
18 APPROACH TO CONSTRUCTION? WHY?

19 A. NMOGA’s suggested language allows for the practices just described so that operators of
20 these engines/compressors have the ability to optimize their maintenance and operations without
21 undue penalty.

22 Q. WHY HAS NMOGA PROPOSED TO DELETE THE DEFINITION OF “CUSTODY
23 TRANSFER” SET FORTH IN PROPOSED 20.2.50.7.K? DID MY. BISBY-KUEHN AND
24 MR. PALMER’S TESTIMONY IN EXHIBIT 32, PAGE 15, IN SUPPORT OF THIS
25 DEFINITION ADEQUATELY ADDRESS THE COMPLEXITIES THIS POSES FOR
26 INDUSTRY?

27 A. The term Custody Transfer is used only one time in this rule, that being as part of another
28 definition in 20.2.50.7.V “Local distribution custody transfer station”. The term “Custody
29 Transfer” is not needed and may cause confusion as the concept of where custody transfer occurs
30 is highly case specific and therefore is difficult to pre-define. Also note that the NMOGA redline
31 comments contain an error. We say that ““Local distribution custody transfer”, a term that is
32 defined separately at 20.2.50.7.K”. That should have referenced “...defined separately at
33 20.2.50.7.V.”

34 Q. IS NMOGA COMFORTABLE WITH THE PROPOSED DEFINITION OF
35 “GATHERING AND BOOSTING STATION” AT 20.2.50.7.Q AS EXPLAINED BY MS.
36 BISBY-KUEHN AND MR. PALMER IN EXHIBIT 32, PAGE 17 OF THEIR TESTIMONY

37 A. No. We believe that the NMED proposed definition, as respects natural gas compressor
38 stations situated between upstream production facilities (what NMOGA recommends calling
39 “well production facilities”) and natural gas processing plants, is correct but this definition leaves

out circumstances where natural gas is not processed before delivery to an end user. Further, it does not address facilities that perform a similar role in the crude oil handling process.

Q. WHY IS THE PROPOSED NMOGA REDLINE AT NMOGA EXHIBIT 47, WHICH DEFINES A GATHERING AND BOOSTING SITE AS “A PERMANENT COMBINATION OF EQUIPMENT LOCATED DOWNSTREAM OF A WELL PRODUCTION FACILITY THAT COLLECTS OR MOVES NATURAL GAS PRIOR TO THE INLET OF A NATURAL GAS PROCESSING PLANT OR PRIOR TO A NATURAL GAS TRANSMISSION PIPELINE OR TRANSISSION COMPRESSOR STATION IF NO GAS PROCESSING IS PERFORMED; OR COLLECTS, MOVES, OR STABILIZES CRUDES OIL OR CONDENSATE PRIOR TO AN OIL TRANSMISSION OR OTHER FORM OF TRANSPORTATION” SUPERIOR AS A DEFINITION?

A. NMOGA has tried to carefully identify facilities so that there are no gaps, ambiguities, or overlaps in defined terms and therefore to provide clarity as to where various sections of this rule apply. Clarity should be valuable to both the NMED and the regulated community. Besides what is already included in the definition, NMOGA recognizes that natural gas is sometimes collected from various sources (mostly well production facilities) and compressed from a lower pressure to a higher pressure for further transport to a natural gas transmission system (which can include transmission compressor stations) and on to end users without being sent to a natural gas processing plant. Such facilities upstream of transmission systems should be included in the definition of “Gathering and Boosting Stations” regardless of ownership of those facilities. There are also sites where crude oil is collected from various sources (well production facilities) for stabilization or simply for temporary storage prior to delivery to market(s). NMOGA believes that these Central Delivery Points (CDPs) should be considered “Gathering and Boosting Stations” as they are more like natural gas gathering and boosting stations than they are well production facilities. We believe that adopting the NMOGA suggested change will result in greater clarity in these regulations. We have provided a demonstrative exhibit (NMOGA Exhibit 51) that depicts all typical facilities utilized in the oil and gas production, gathering, processing, and transmission facets and illustrates how the NMOGA-suggested definitions give clarity with no gaps, ambiguities, or overlaps of facility types so that all aspects of the proposed rule can be applied without confusion. Q. ARE YOU CONCERNED ABOUT AMBIGUITY IN NMED’S PROPOSED DEFINITION OF “HYDROCARBON LIQUID” AT 20.2.50.7.S? IN EXHIBIT 32, PAGE 17, MS. BISBY-KUEHN AND MR. PALMER TESTIFIED IT IS LIMITED TO OIL, CONDENSATE, AND INTERMEDIATE HYDROCARBONS. WHAT YOU’RE YOUR CONCERNS WITH THAT DEFINITION?

A. Yes. Produced water can contain small amounts of hydrocarbons. The amount of hydrocarbon is very low because by the time produced water reaches a storage tank, it has gone through multiple stages of separation at progressively lower pressures. The resulting produced water has very low potential to emit any VOCs. The definition, as proposed, is not clear that these small amounts of hydrocarbons in produced water could be misconstrued to consider produced water to be a hydrocarbon liquid.

Q. DO YOU AGREE WITH THE NMOGA REDLINE IN NMOGA EXHIBIT 47 THAT THIS DEFINITION SHOULD CLEARLY STATE “HYDROCARBON LIQUID DOES NOT INCLUDE PRODUCED WATER”?

A. NMOGA’s suggested language provides needed clarity so that requirements meant for what are truly hydrocarbon liquids are not misapplied.

Q. IN EXHIBIT 32, PAGE 17, MS. BISBY-KUEHN AND MR. PALMER TESTIFIED THAT “LIQUID TRANSFERS” SHOULD INCLUDE “PRODUCED WATER.” BASED ON THE CONCERN ABOUT PRODUCED WATER EXPRESSED ABOVE, DO YOU SUPPORT THE NMOGA REDLINE IN NMOGA EXHIBIT 47 THAT WOULD EXCLUDE PRODUCED WATER FROM THE DEFINITION OF LIQUIDS TRANSFER?

A. Yes. See above

Q. DO YOU BELIEVE THAT IT IS NECESSARY TO REGULATE TRANSFERS FROM A TRANSPORT TRUCK TO A STATIONARY VESSEL OR TANK BATTERY AS IT APPEARS PROPOSED 20.2.50.7.U “LIQUID TRANSFER” DOES AND THE BISBEY-KUEHN/PALMER TESTIMONY IN EXHIBIT 32, PAGE 17 IMPLIES OR IS THIS REDUNDANT WITH THE STORAGE VESSEL REGULATIONS IN PROPOSED 20.2.50.125?

A. When hydrocarbon liquids are transferred from a storage vessel to a transport vehicle, hydrocarbon vapors are discharged from the transport vehicle tank. NMOGA generally supports requirements for the capture or destruction of such vapors during the loading operation as found in 20.2.50.120 but as modified by NMOGA’s suggested language. However, when these transport vehicles are unloaded to a storage vessel there are no hydrocarbon vapors discharged from the transport vehicle so clearly no capture or control of vapors should be required on the vehicle. When these hydrocarbon liquids are unloaded into a storage vessel, any vapors that are either generated by the unloading process or are expelled from the receiving storage vessel due to fluid level rise should be captured or controlled by the emissions equipment on the storage vessel itself. The requirements for capture or control of vapors associated with storage vessels are already adequately addressed in section 20.2.50.123 – Storage Vessels. The language dealing with unloading of transport vehicles into storage vessels is unnecessary and should be removed from 20.2.50.120.

Q. DO YOU AGREE WITH THE PROPOSED DEFINITION OF “NATURAL GAS COMPRESSOR STATION” AT 20.2.50.7.W OR MS. BISBY-KUEHN AND MR. PALMER’S PROPOSED REVISIONS FILED WITH THEIR TESTIMONY?

A. As mentioned earlier, NMOGA has carefully crafted language to prevent gaps, ambiguities, or overlaps in definitions to create clarity for NMED and the regulated community. The definition of Natural Gas Compressor Station creates confusion because compressors at facilities that are upstream of natural gas processing plants handle hydrocarbons that are very different in character than those hydrocarbons handled at a compressor station downstream of a natural gas processing plant. Since natural gas processing plants remove virtually all VOCs from

1 the gas stream by cooling the natural gas such that the VOCs condense into liquids and are
2 recovered, these “downstream” compressor stations handle hydrocarbon gasses that contain
3 almost no VOCs. This fact should be taken into consideration as requirements related to ozone
4 prevention are established. By separating “upstream” compression stations (in Gathering and
5 Boosting Stations) from “downstream” compression stations (in Transmission Compression
6 Stations) NMED has the proper ability to devise appropriate requirements for each facility type.
7 By lumping both compressor station types into this one definition, upstream compression
8 stations can fall into both Gathering and Boosting Station definition and Natural Gas
9 Compression Stations and there is no separate designation for Transmission Compressor Stations
10 which clearly need to be treated separately. In addition, compressors at wellhead sites are
11 components of the wellhead facility and should not be considered compressor stations.

12 Q. BASED UPON THOSE CONCERNS, DO YOU BELIEVE THAT THE NMOGA
13 APPROACH IN NMOGA EXHIBIT 47 PROVIDES GREATER CLARITY?

14 A. Yes. By utilizing NMOGA’s recommended language for both Gathering and Boosting
15 Stations and for Transmission Compressor Stations, all facilities fall clearly under one or the
16 other with no gaps, ambiguities, or overlaps.

17 Q. SO THE INTENT OF THE NMOGA REDLINES IS BREAK ALL COMPRESSORS
18 INTO ONE OF THREE CATEGORIES: THOSE AT A WELL PRODUCTION FACILITY
19 (NMOGA TERM) OR WELL SITE (NMED TERM), THOSE AT A GATHERING AND
20 BOOSTING SITE, AND TRANSMISSION COMPRESSOR STATION?

21 A. Yes. I have already addressed compressors employed to boost pressure of natural gas
22 after it has left the well production facility (G&B) and gas once it has been stripped of (or never
23 had) heavier hydrocarbon components like propane, butane, etc. at Transmission Compressor
24 Stations. The third category is compressors that are utilized at well production facilities (well site
25 as per NMED). These compressors are not included in this part. The NMOGA language results
26 in clarity because it avoids gaps, ambiguities, and overlaps so that appropriate requirements can
27 be crafted for each category.

28 Q. DO YOU BELIEVE THAT THERE ARE ANY GAPS IN THIS DEFINITION OR IS IT
29 COTERMINOUS WITH YOUR UNDERSTANDING OF NMED’S INTENT WITH ITS
30 DEFINITION OF ‘NATURAL GAS COMPRESSOR STATION’?

31 A. See above.

32 Q. IN EXHIBIT 32, PAGE 20, MS. BISBY-KUEHN AND MR. PALMER STATE THAT
33 “PRODUCED WATER” IS A FLUID FROM DRILLING. IN ITS REDLINES IN NMOGA
34 EXHIBIT 47, NMOGA PROPOSED TO DEFINE “PRODUCED WATER” AS “A LIQUID
35 THAT IS AN INCIDENTAL BYPRODUCT FROM WELL COMPLETION AND THE
36 PRODUCTION OF OIL AND GAS” INSTEAD OF NMED’S STATEMENT THAT IT IS
37 FROM DRILLING. WHY DO YOU RECOMMEND THIS CHANGE?

38 A. Liquids associated with drilling are not produced by the well. These liquids are brought
39 to the drilling site specifically to facilitate safe drilling operations. They typically contain

1 extremely low quantities of VOCs (if any) and are not appropriate for ozone precursor control
2 regulations. Including liquids associated with the drilling process could lead to misapplication of
3 rules intended for actual produced liquids including completion flowback and normal oil and gas
4 production.

5 Q. IN EXHIBIT 32, PAGE 21, MS. BISBY-KUEHN AND MR. PALMER TESTIFIED AS
6 THE PROPOSED DEFINITION OF "RESPONSIBLE OFFICIAL" AT 20.2.50.7.NN. IN THE
7 NMOGA REDLINE IN NMOGA EXHIBIT 47, NMOGA HAS PROPOSED ADDING THE
8 FOLLOWING LANGUAGE TO NMED'S DEFINITION "SUBJECT UNIT AND EITHER (A)
9 THE FACILITIES EMPLOY MORE THAN 250 PERSONS OR HAVE GROSS ANNUAL
10 SALES OR EXPENDITURES EXCEEDING \$25 MILLION (IN SECOND QUARTER 1980
11 DOLLARS), OR (B) THE DELEGATION OF AUTHORITY TO SUCH REPRESENTATIVE
12 IS APPROVED IN ADVANCE BY THE DEPARTMENT." WHY WAS NMOGA SEEKING
13 THIS CHANGE?

14 A. NMOGA suggested this change to align with the already established definition of
15 responsible official found in part 70 NMAC.

16 Q. WOULD NMOGA ALSO BE GOOD WITH TRUNCATING THE DEFINITION SO
17 THAT IT READS ON LINE 21 "OR A DULY AUTHORIZED REPRESENTATIVE OF THE
18 CORPORATION."

19 A. Yes. NMOGA supports this change. Under this definition, corporations have the ability
20 to designate appropriate representatives who are knowledgeable and accountable regardless of
21 their business structure.

22 Q. UNLIKE MS. BISBY-KUEHN'S AND MR. PALMER'S TESTIMONY IN EXHIBIT
23 32, PAGE 21-22, WHICH REQUIRED THE REPRESENTATIVE TO BE IN OVERALL
24 CHARGE OF THE FACILITY, NMOGA WOULD PREFER THE MORE GENERAL "DULY
25 AUTHORIZED REPRESENTATIVE" TO ALLOW PERSONNEL WITH A CLOSER
26 KNOWLEDGE OF THE FACILITIES AND ISSUES TO SIGN ROUTINE FORMS, WOULD
27 IT NOT?

28 A. This language allows those that act as duly authorized representatives of the corporation
29 to be those that have deeper understanding of what is being represented to the NMED. This
30 should be to NMED's benefit as well as that of the corporation.

31 Q. THROUGHOUT THEIR TESTIMONY IN EXHIBIT 32, MS. BISBY-KUEHN AND
32 MR. PALMER REFER TO "TANK BATTERIES." WHAT IS THE PROBLEM WITH THE
33 TERM "TANK BATTERY"?

34 A. The term "tank battery (or batteries)", is a commonly used term in the oil and gas
35 industry but it is a term that lacks precision. The term in common usage can refer to what
36 NMOGA defines as a Well Production Facility and what NMED defines as a Well Site but,
37 because other types of facilities can contain a tank or set of tanks, in common usage the term
38 "tank battery" can also be associated with a crude oil central delivery point, a natural gas
39 gathering system compression station, or a salt water disposal station (just to name a few

1 examples) and thus cause confusion. As depicted in NMOGA Exhibit 51, many facilities contain
2 storage tanks as a component of the facility, but the existence of tanks does not make all of them
3 Well Production Facilities. In order to have clarity as to what regulations in the various sections
4 of this rule apply to which specific facilities, NMOGA recommends removing the term “tank
5 battery (or batteries)” from definitions and from the applicability sections and rely upon the
6 terms suggested by NMOGA.

7 Q. SO TO BE CLEAR, YOU BELIEVE THAT “TANK BATTERY” SHOULD NOT BE
8 USED IN THE APPLICABILITY SECTIONS OF THE RULES DUE TO THESE
9 AMBIGUITIES.

10 A. Yes.

11 Q. IN EXHIBIT 32, PAGES 83-__, MS. BISBY-KUEHN AND MR. PALMER
12 TESTIFIED THAT PROPOSED 20.2.50.116 WOULD REQUIRE LEAKS TO BE REPAIRED
13 WITHIN 15 DAYS, UNLESS DETECTED USING OGI, IN WHICH CASE LEAKS ARE
14 REQUIRED TO BE REPAIRED WITHIN 7 DAYS, UNLESS “REPAIR DELAYED”
15 DESIGNATION IS MADE. DOES IT MAKE ANY DIFFERENCE TO THE REPAIR TIME
16 WHETHER THE LEAK IS DETECTED BY OGI OR ANOTHER METHOD? A. No. Once a
17 leak is detected by any means, the steps to repair that leak are the same whether it is detected by
18 AVO, Method 21 or OGI. You still have to prepare the work order, gather the materials and
19 dispatch an appropriate maintenance employee or contractor to complete the work.

20 Q. IN THE SAME TESTIMONY, MS. BISBY-KUEHN AND MR. PALMER
21 SUGGESTED 7 OR 15 DAYS. IS THAT SUFFICIENT TIME?

22 A. No. While some repairs can be done quickly, many require internal review,
23 procurement, and personnel scheduling (including third party contractors) do effect the repairs.
24 Supply chain constraints alone can take more than 7 to 15 days. This is why NMOGA
25 recommends a 30 day timeframe for repairs after leak discovery. The change will also align the
26 repair time requirements with NSPS OOOOa which will eliminate unnecessary confusion.

27 Q. Tom Alexander, technical witness for the Environmental Defense Fund, has testified that
28 NMED should require operators to use vapor tight flowback vessels equipped with control
29 devices to reduce venting during flowback. EDF Exhibit UU. What concerns do you have with
30 this proposal?

31
32 A. NMOGA believes that NMED should follow the Oil Conservation Commission’s lead on
33 this concept and reject this requirement on operational safety grounds alone. This same proposal
34 was urged before the Oil Conservation Commission. Under the new OCD Waste Rules, when
35 producing fracture fluids during “initial flowback”, operators are allowed to flow back hydraulic
36 fracture stimulation fluids to non-vapor tight vessels. Under those rules initial flowback ends
37 when it is technically feasible to operate a separator. During initial flowback it is not feasible to
38 operate a separator because there is little gas being produced as the flowback fluids are mostly
39 water. When wells do begin to produce hydrocarbons, including gas, if these fluids are produced
40 to vapor tight vessels, gas begins to displace and mix with air that is in these vessels potentially
41 creating an explosive mixture in these vessels. This is a safety risk that was identified by the Oil

1 Conservation Division in their testimony before the Oil Conservation Commission. I have
2 attached a copy of that testimony as Exhibit 55. The Oil Conservation Commission ultimately
3 agreed, as seen in its deliberations, attached as Exhibit 56, and the final rule definition discussed
4 above. I have personally seen the results of flowing oil and gas through a closed, vapor tight
5 vessel when it spontaneously exploded likely due to 1) developing an explosive mixture and 2)
6 discharge of static electricity built up by the action of moving fluids. Our company was lucky
7 that no one was injured in our incident, but it is best to avoid the danger rather than rely on luck,
8 especially since the emissions during initial flowback are minimal.

9
10 Q. Have you reviewed the technical and economic basis for this proposal provided by Mr.
11 Alexander?

12
13 A. Yes. I see several flaws in this testimony that are critical to the proper decision on this
14 issue. First is the description of the flowback process. His testimony is that initial flowback
15 phase terminates and separation flowback phase begins based upon the well's flow settling
16 "...into a more predictable and declining rate and pressure regime". While this might be how the
17 initial flowback phase is defined in other states, in New Mexico the recently adopted Waste Rule
18 (generally in alignment with NSPS OOOOa) establishes the end of initial flowback based upon
19 the moment when a separator can technically function. This is typically well before the time that
20 a well's flow transitions to a "predictable and declining rate and pressure regime". In fact, the
21 well's flow will build in strength and variability after a separator is technically able to operate so
22 the time that was described as initial flowback in his testimony would be after flowback is being
23 routed through a separator and then on to sales or, in rare circumstances, to a flare to be in
24 compliance with OCD rules. Second, the testimony goes through an economic analysis that
25 ignores the risk that this practice would impose on workers on site. As I mentioned earlier, while
26 routing initial flowback to closed, vapor tight vessels (which contain air to start with), the head
27 space (the area above liquid level) in the tanks transitions from 100% air to 100% hydrocarbon
28 gas, and necessarily passes through a period of time when an explosive mixture is created within
29 the vessel head space. I fail to see how examining the economic "cost effectiveness" of such a
30 practice, while ignoring safety concerns, is appropriate. Under the OCD Waste Rule
31 requirements for flowback, there will be very little hydrocarbon gas emitted during initial
32 flowback and virtually none once separation flowback begins. We should not put our workers at
33 any risk for this tiny reduction in hydrocarbon gas emissions.

34
35 Q. Based on your review, do you believe this proposal is cost effective and technically
36 feasible?

37
38 A. See above.

39
40 Q. Mr. Alexander also proposes requiring operators to install auto gauges on new storage
41 tanks and flowback vessels. Dr. McCabe of Clean Air Advocates has offered a similar proposal.
42 CAA Exhibit 3. What concerns do you have with this proposal?

43
44 A. The automatic tank gauging system that Mr. Alexander proposes is already required on
45 all new controlled tanks by the recently adopted OCD Waste Rule. Such systems constantly
46 measure the liquid level in a tank so that thief hatches do not need to be opened to determine the

1 liquid level. NMOGA believes that the OCD has thoroughly evaluated the merits of such
2 systems and recommends that NMED not impose separate requirements to these already
3 established regulations in order to avoid conflict between agency requirements.
4

5 Dr. McCabe has made a different recommendation. He advocates for requiring an
6 automatic gauging system like the one offered by Mr. Alexander plus he advocates for a Lease
7 Automatic Custody Transfer system (or LACT unit) be required on all new or modified tanks.
8 NMOGA strongly disagrees with Dr. McCabe on the idea of requiring LACT units on all new or
9 modified tanks. Even the smallest LACT units are very expensive, and all require electric power
10 to operate. Operators will tend to choose to install LACT units on facilities with substantial crude
11 oil production because it is operationally advantageous to do so, and these facilities tend to
12 already have electric power. Therefore, those facilities where LACT units would have the
13 greatest impact on tank measurement related emissions reduction will already have them
14 installed. On smaller facilities the cost per volume of reduced emissions would be excessive,
15 especially if electrical power generation were to be required to run the LACT (likely swapping
16 NOx generation for VOC reduction).
17

18 Q. Have you reviewed the technical and economic basis for this proposal and, based upon
19 your experience, are they technically and economically reasonable?
20

21 A. NMOGA recognizes the requirements to utilize auto-gauging as imposed by the OCD
22 Waste Rule and the industry is deploying such auto-gauging systems on all new controlled tanks
23 as required. One benefit of such auto-gauging systems is that tanks do not have to be opened
24 daily to measure and record daily liquid production (oil or water). The OCD's regulations
25 requiring these systems on new controlled tanks recognizes that these systems are expensive to
26 both install and maintain so they are not required on uncontrolled tanks where production rates
27 are typically much lower than on controlled tanks and are required only on new tanks where
28 installation costs are typically less because such systems can be included in designs at the start
29 instead of being added by retrofit on existing tanks. NMOGA believes that NMED should defer
30 to OCD on such requirements.
31

32 Mr. Alexander relies upon an economic basis for his recommendation that is actually based upon
33 a completely different system (i.e., LACT units) and therefor does not even apply to his proposed
34 recommendation. The economic analysis he cites from proceedings in Colorado are related to
35 LACT units and not automatic tank gauging systems like he describes.
36

37 Dr. McCabe also relies on the economic justification from the Colorado proceedings but he, too,
38 fails to apply this analysis correctly. Dr. McCabe states that "Operators can avoid these
39 emissions [emission related to opening tank hatches for liquid level measurement] by employing
40 an alternative system to measure and sample the liquids in the vessel." He then goes on to
41 describe a LACT unit, which does not provide liquid level measurements in tanks. LACT units
42 measure liquid volumes being pumped out of a tank and have no ability to detect specific liquid
43 levels within a tank. To measure liquid levels within a tank, an operator would install an
44 automatic tank gauging system like the OCD now requires on all new controlled tanks. The
45 economic analysis that Dr. McCabe cites was performed by a group called Local Government
46 Coalition and purports to be based on the costs associated with the installation and use of LACT

1 units. First, this analysis appears to ignore the significant additional costs of an automatic tank
2 gauging system, so its conclusions are incomplete and not valid for Dr. McCabe's
3 recommendation. But more importantly the analysis itself seems seriously flawed. The analysis
4 cites a cost per ton for emissions reduction related to the addition of a LACT unit for a tank
5 battery with eight tanks with 100 truck loadouts per year. The emissions reduction from the use
6 of a LACT unit associated with each loadout is a function of the number of tanks at a Well
7 Production Facility. Using a typical crude oil tanker truck volume of 180 barrels per loadout, a
8 site that has 100 loadouts per year equates to a production rate at that facility of 18,000 barrels
9 per year or 49.2 barrels per day. It is highly unlikely that a facility serving such a low production
10 rate would have more than two oil tanks. The Local Government Coalition calculations that are
11 based on eight tanks are likely to result in a cost per ton of emissions reduction that are low by
12 nearly a factor of four. I do not believe that this economic analysis and justification are reliable
13 to support either Mr. Alexander or Dr. McCabe's recommendation. Again, NMOGA
14 recommends that NMED defer to the recently adopted requirements by the OCD and should not
15 include either of these recommendations in this rule.

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18
19 By: /s/ John Smitherman
20 John Smitherman
21